

CLAIMS

1. A suspension system for a vehicle wheel set comprising an upper leaf
spring and a lower leaf spring each being mounted or mountable on
5 opposed sides of an associated vehicle generally transversely of the
associated vehicle axle, one end of each upper and lower leaf spring
comprising connection means for attachment thereof to an associated
vehicle chassis, and auxiliary spring means mounted in series with the
upper leaf spring and arranged to provide the associated vehicle with ride
10 characteristics and dynamic deflection geometry substantially the same as
those of a conventional solo leaf spring system as herein defined.
2. A system according to claim 1, wherein said auxiliary spring means is
15 mounted at an end distant from said associated connection means of the
upper leaf spring.
3. A suspension system for a vehicle wheel set comprising an upper leaf
spring and a lower leaf spring each being mounted or mountable on
20 opposed sides of an associated vehicle generally transversely of the
associated vehicle axle, one end of each upper and lower leaf spring
comprising connection means for attachment thereof to an associated
vehicle chassis, and auxiliary spring means mounted in series with the
upper leaf spring and arranged to alter its rate in proportion to the imposed
load at constant ride height.
25
4. A system according to any of claims 1, 2 or 3, wherein said auxiliary
spring means comprises an air spring.
5. A system according to any of claims 1, 2 or 3, wherein said auxiliary
30 spring means comprises hydraulic, hydro-pneumatic, electro-mechanical
or manual mechanical spring means.

- 11 -

6. A system according to any preceding claim, wherein said auxiliary spring
means comprises means arranged to detect the height across the vehicle
and to adjust the auxiliary spring means to compensate for any difference
5 in height.
7. A system according to any preceding claim, wherein the components are
arranged to obviate or substantially reduce torsion being applied to the
axle and thereby maintain the full axle control of a conventional leaf
10 spring system.
8. A system according to any preceding claim which is further arranged to
mimic the dynamic deflection geometry of a conventional leaf spring
system around the normal loading range.
- 15 9. A system substantially as hereinbefore described with reference to Figure
6 of the accompanying drawings.